

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended) A recording apparatus for recording, onto a recording medium, a compressed stream that is obtained by compressively encoding a broadcast audio/video signal-signals, on a recording medium, said recording apparatus including:

an encoder operable to (i) receive the broadcast audio/video signal-for compressively coding the audio/video signals, (ii) generate the compressed stream having a main unit from the received broadcast audio/video signal, (iii) divide the compressed stream into a plurality of sub-units according to a predetermined time range, (iv) form, according to an instruction, the main unit from a determined portion of the plurality of sub-units, -and (v) output-outputting a the compressed stream having the main unit formed from the determined portion of sub-units, and (vi) create sub-unit attribute information corresponding to each sub-unit which forms the main unit;

a recording buffer memory-for operable to store-storing the compressed stream having the main unit formed from the determined portion of sub-units;

a recorder-for operable to record-recording the compressed stream stored in-the said recording buffer memory,-on onto the recording medium; and

a system controller-for operable to (i) control-controlling the respective units said encoder, said recording buffer memory, and said recorder,

——said encoder dividing a compressed stream of audio/video signals within a predetermined time range to form plural sub-units and forming a main unit from a group of these sub-units to output the compressed stream as well as creating sub-unit attribute information concerning the sub-units, and

——said system controller (ii) generate-generating management information for each of the sub-units sub-unit of which said encoder created-from sub-unit attribute information, the corresponding sub-unit attribute information, (iii) insert-and-inserting the management information-in into a predetermined position-in of the main unit, (iv) monitor a data size of the sub-units stored in said recording buffer memory, and (v) provide, based on the data size, the instruction according to which said encoder forms the main unit, wherein:

when the data size of the sub-units stored in said recording buffer memory exceeds a predetermined threshold, said system controller provides the instruction to form the main unit; and

_____ said recorder-reading is operable to read the compressed stream successively from the said recording buffer memory when the sub-unit management information has been inserted into the predetermined position of the main unit by said system controller, and-recording record the compressed stream, read from said recording buffer memory, stream on onto the recording medium.

Claim 2 (Currently Amended) The recording apparatus of Claim 1, wherein
_____ the said encoder-compressively is operable to-encodes encode the broadcast audio/video signals-signals by using a variable-rate controlled compression method.

Claim 3 (Currently Amended) The recording apparatus of Claim 1, wherein:
said system controller is operable to monitor a number of main units formed by said encoder according to the instruction from said system controller;
_____ the a maximum number of the main units constituting the compressed stream is defined as a predetermined value-Nnumber; and
_____ when the number of main units constituting the compressed stream reaches the maximum number of main units, said recorder is operable to stop recording.

Claim 4 (Cancelled)

Claim 5 (Currently Amended) The recording apparatus of Claim 1, wherein:
the said system controller-forms is operable to form a main unit set from a group of the plural main units; and
_____ when the a maximum number-value of the main units-included in constituting the main unit set is-defined as a predetermined value-nnumber; and
_____ when the number of the main units constituting the compressed stream reaches the maximum number of main units-predetermined value-n, the main unit set is formed

from a group comprising the ~~predetermined value n of the~~ maximum number of main units, ~~and then followed by starting a formation of another next main unit set~~ is initiated.

Claim 6 (Currently Amended) The recording apparatus of Claim 3 wherein
a memory size of the recording buffer memory is defined by a recording
capacity of the recording medium and the ~~predetermined value N~~.

Claim 7 (Currently Amended) The recording apparatus of Claim 3, wherein
——— a memory size of the said recording buffer memory is defined by a size of data
to be recorded and the ~~predetermined value N~~ number.

Claim 8 (Cancelled)

Claim 9 (Currently Amended) The recording apparatus of Claim ~~8~~ 1, wherein
the ~~predetermined threshold value M~~ is defined by a memory size of the said
recording buffer memory.

Claim 10 (Currently Amended) The recording apparatus of Claim ~~8~~ 1, wherein:
the a maximum number of the main units constituting the compressed stream is
set at a predetermined number ~~value N_i~~; and
the ~~predetermined threshold value M~~ is defined by a recording capacity of the
recording medium and the maximum number of main units ~~predetermined value N~~.

Claim 11 (Currently Amended) The recording apparatus of Claim ~~8~~ 1, wherein:
the a maximum number of the main units constituting the compressed stream is
set at a predetermined number ~~value N_i~~; and
the ~~predetermined threshold value M~~ is defined by a size of data to be recorded
and the maximum number of main units ~~predetermined value N~~.

Claim 12 (Currently Amended) The recording apparatus of Claim 1, wherein

~~the~~said encoder is operable to utilize~~detects~~ at least one information~~among~~
from information concerning a data size of~~the~~ each sub-unit which forms the main unit,
information concerning a position of~~the~~ each sub-unit~~in~~ which forms the main unit, and
information concerning a playback time of~~the~~ each sub-unit which forms the main unit,
as the sub-unit attribute information.

Claim 13 (Currently Amended) The recording apparatus of Claim 1, wherein
———~~The~~when said system controller inserts the sub-unit management information
into the main unit the sub-unit management information so as to be is placed at a head of
each sub-unit comprising the main unit.

Claim 14 (Currently Amended) The recording apparatus of Claim 1, further
comprising:
———~~a unit for issuing~~ operable to issue a recording stop command~~or~~ and a recording
start command, wherein:

———said system controller~~posting~~ is operable to post a coding stop instruction
to~~the~~ said encoder when the recording stop command is issued by said unit; and

———said encoder~~finishing~~ is operable to finish forming the main unit~~when unit~~
upon receiving the coding stop instruction from said system controller, taking and a the
sub-unit~~that is~~ being formed at a time when the coding stop instruction is received by
said encoder~~as is~~ a last sub-unit to be encoded by said encoder.

Claim 15 (Currently Amended) The recording apparatus of Claim 1, further
comprising:
———~~a decision unit for deciding~~ operable to determine the a type of the recording
medium, wherein; and
———said system controller~~selecting~~ is operable to either inserting insert the
sub-unit management information~~in~~ into a predetermined position in the main unit ~~on the~~
~~basis of a result of the decision by the decision unit, or controlling and control the said~~
~~recorder for recording to record~~ the sub-unit management information~~in~~ onto a sub-unit
management area on the recording medium; and

said system controller is operable to either insert the sub-unit management information or control said recorder to record the sub-unit management information according to the determination of said decision unit.

Claim 16 (Currently Amended) A recording method for recording, onto a recording medium, by which a compressed stream that is obtained by compressively coding encoding a broadcast audio/video signal signals is recorded on a recording medium, said recording method comprising:

- receiving the broadcast audio/video signal;
- encoding the broadcast audio/video signal;
- a coding step of compressively coding the audio/video signals;
- generating the compressed stream, which includes a main unit, from the received broadcast audio/video signal;
- dividing the compressed stream into a plurality of sub-units according to a predetermined time range;
- forming, according to an instruction, the main unit of the compressed stream from a determined portion of the plurality of sub-units thereby generating a compressed stream;
- creating sub-unit attribute information corresponding to each sub-unit which forms the main unit;
- a storage step of storing the compressed stream, having the main unit formed from the determined portion of sub-units, in a buffer memory;
- a recording step of recording the compressed stream stored in the buffer memory in the storage step on onto the recording medium; and
- a system control step of controlling said receiving, said generating, said creating, said storing, and said recording the respective steps, wherein:
 - in the coding step, a compressed stream of audio/video signals within a predetermined time range is divided to form plural sub-units, and a main unit is formed from a group of the sub-units as well as sub-unit attribute information concerning the sub-unit is created,

~~_____ in the system control step~~ said controlling includes (i) generating, management information ~~for of each of the sub-units of which the sub-unit attribute information is created by said creating of the sub-unit attribute information is generated from the corresponding sub-unit attribute information, and, (ii) inserting each of the management information is inserted in into a predetermined position in of the main unit, (iii) monitoring a data size of the sub-units stored in the buffer memory, and (iv) providing, based on the data size, the instruction to said forming of the main unit; and~~

~~_____ in the~~ when the data size of the sub-units stored in the buffer memory exceeds a predetermined threshold, said controlling further includes providing the instruction to form the main unit; and

~~_____ said recording of the compressed stream step, includes reading the compressed stream successively from the buffer memory when the sub-unit management information has been inserted into the main unit, and recording the compressed stream in, read from the buffer memory, which the sub-unit management has been inserted is successively recorded on onto the recording medium.~~